



SEQUENCE LISTING

(1) GENERAL INFORMATION:

- (i) APPLICANT: Saiko HOSOKAWA
Toshiaki TAGAWA
Yoko HIFAKAWA
Norihiko ITC
Masahiro NAGAIKE
- (ii) TITLE OF INVENTION: Human Monoclonal Antibody
Specifically Binding to Surface Antigen of Cancer
Cell Membrane

(iii) NUMBER OF SEQUENCES: 41

- (iv) CORRESPONDENCE ADDRESS:
 - (A) ADDRESSEE: Wanderoth, Lind & Ponack
 - (B) STREET: 2033 K Street, N.W., #800
 - (C) CITY: Washington
 - (D) STATE: D.C.
 - (E) COUNTRY: U.S.A.
 - (F) CIP: 20006
- (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: Diskette, 3.5 inch, 1.44 mb
 - (B) COMPUTER: IBM Compatible
 - (C) OPERATING SYSTEM: MS-DOS
 - (D) SOFTWARE: WordPerfect 5.1
- (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER: 09/467,903
 - (B) FILING DATE: December 21, 1999
 - (C) CLASSIFICATION:
- (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: 08/450,363
 - (B) FILING DATE: May 25, 1995
- (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: 08/360,125
 - (B) FILING DATE: December 21, 1994
- (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: 07/305,534
 - (B) FILING DATE: June 29, 1992
- (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: JP158859/1991
 - (B) FILING DATE: June 28, 1991
- (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: JP158860/1991
 - (B) FILING DATE: June 28, 1991
- (vii) PRIOR APPLICATION DATA:

- (A) APPLICATION NUMBER: JP158861/1991
- (B) FILING DATE: June 28, 1991

(viii) ATTORNEY/AGENT INFORMATION:

- (A) NAME: Warren M. Cheek Jr.
- (B) REGISTRATION NUMBER: 33,367
- (C) REFERENCE/DOCKET NUMBER:

(ix) TELECOMMUNICATION INFORMATION:

- (A) TELEPHONE: 202-721-8200
- (B) TELEFAX: 202-721-8250
- (C) TELEX:

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(vi) ORIGINAL SOURCE: human IgG antibody

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE:
- (H) CELL LINE:
- (I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

(ix) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:

(x) PUBLICATION INFORMATION:

- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

G GCC CTT GGT GGA GGC TGA AGA GAC GGT GAC CAT TCT

37

- (2) INFORMATION FOR SEQ ID NO:2:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 21 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE: human IgG antibody
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE:
 - (H) CELL LINE:
 - (I) ORGANELLER:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
 - (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
 - (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:
TGG TGC AGC CAC AGT TCG TTT 21

- (2) INFORMATION FOR SEQ ID NO:3:
- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 357 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:

(iv) ANTI-SENSE:
 (vi) ORIGINAL SOURCE:
 (A) ORGANISM:
 (B) STRAIN:
 (C) INDIVIDUAL ISOLATE:
 (D) DEVELOPMENTAL STAGE:
 (E) HAPLOTYPE:
 (F) TISSUE TYPE:
 (G) CELL TYPE: Hybridoma producing human
 antibody GAH
 (H) CELL LINE:
 (I) ORGANELLE:
 (vii) IMMEDIATE SOURCE:
 (A) LIBRARY:
 (B) CLONE:
 (viii) POSITION IN GENOME:
 (A) CHROMOSOME/SEGMENT:
 (B) MAP POSITION:
 (C) UNITS:
 (ix) FEATURE:
 (A) NAME/KEY:
 (B) LOCATION:
 (C) IDENTIFICATION METHOD:
 (D) OTHER INFORMATION:
 (x) PUBLICATION INFORMATION:
 (A) AUTHORS:
 (B) TITLE:
 (C) JOURNAL:
 (D) VOLUME:
 (E) ISSUE:
 (F) PAGES:
 (G) DATE:
 (H) DOCUMENT NUMBER:
 (I) FILING DATE:
 (J) PUBLICATION DATE:
 (K) RELEVANT RESIDUES:
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:
 CAG GTG CAG CTG CAG GAG TGG GAG CCA GSA CTG GTG AAG CCT TCA 45
 CAG ACC CTG TCC CTC AAT TGC ACT GTC TCT GGT GGC TCC ATC AGC 90
 AGT TGT GGT TTC TAC TGG AAC TGG ATC CSC CAG CAC CCA GGG AAG 135
 GGC CTG GAG TGG ATT GGG TAC ATC TAT TAC AGT GGG AGC ACC TAC 180
 TAC AAC CCG TCC CTC AAG AGT CGA GTT ACC ATA TCG CTA GAC ACG 225
 TCT AAG AGC CAG TTC TCC CTG AAG CTG AGC TCT CTG ACT GGC GCG 270
 GAC ACG GCC GTG TAT TAT TGT GGG AGG TCT ACC CGA CTA CGG GGG 315
 GCT GAC TAC TGG GGC CAG GGA AAT ATG GTC ACC GTC TCT TCA 357

(2) INFORMATION FOR SEQ ID NO:4:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 342 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear
 (ii) MOLECULE TYPE: cDNA
 (iii) HYPOTHETICAL:
 (iv) ANTI-SENSE:
 (vi) ORIGINAL SOURCE:
 (A) ORGANISM:

- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAFLTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANISM:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

GAC ATC GTG ATG ACC CAG TCT CCA GAC TCC CTG GCT GTG TCT CTG	45
GGC GAG AGG GCC ACC ATC AAC TCC AAG TCC AGC CAG AGT GTT TTA	90
TAC AAC TCC AAC AAT AAG AAA TAC TTA GCT TGG TAC CAG CAG AAA	135
CCA GGA CAG CCT CCT AAG CTG CTC ATT TAC TGG GCA TCT ACC CGG	180
GAA TCC GGG GTC CCT GAG CGA TTC AGT GGC AGC GGG TCT GGG ACA	225
GAT TTC ACT CTC ACC ATC AGC AGC CTG CAG GCT GAA GAT GTG GCA	270
GTT TAT TAC TGT CAG CAG TAT TAT AGT ACT CCG TGG ACG TTC GGC	315
CAA GGG ACC AAG GTG GAA ATC AAA CGA	342

- (2) INFORMATION FOR SEQ ID NO:5:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 119 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:

(D) DEVELOPMENTAL STAGE:
 (E) HAPLOTYPE:
 (F) TISSUE TYPE:
 (G) CELL TYPE: Hybridoma producing human
 antibody GAH
 (H) CELL LINE:
 (I) ORGANELLE:
 (vii) IMMEDIATE SOURCE:
 (A) LIBRARY:
 (B) CLONE:
 (viii) POSITION IN GENOME:
 (A) CHROMOSOME/SEGMENT:
 (B) MAP POSITION:
 (C) UNITS:
 (ix) FEATURE:
 (A) NAME/FET:
 (B) LOCATION:
 (C) IDENTIFICATION METHOD:
 (D) OTHER INFORMATION:
 (x) PUBLICATION INFORMATION:
 (A) AUTHORS:
 (B) TITLE:
 (C) JOURNAL:
 (D) VOLUME:
 (E) ISSUE:
 (F) PAGES:
 (G) DATE:
 (H) DOCUMENT NUMBER:
 (I) FILING DATE:
 (J) PUBLICATION DATE:
 (K) RELEVANT RESIDUES:
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Gln	Val	Gln	Leu	Gln	Glu	Ser	Gly	Pro	Gly	Leu	Val	Lys	Pro	Ser	1	5	10	15
Gln	Thr	Leu	Ser	Leu	Thr	Cys	Thr	Val	Ser	Gly	Gly	Ser	Ile	Ser	20	25	30	35
Ser	Cys	Gly	Phe	Tyr	Trp	Asn	Trp	Ile	Arg	Gln	His	Pro	Gly	Lys	40	45	50	55
Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Tyr	Ser	Gly	Ser	Thr	Tyr		60	65	70	75
Tyr	Asn	Pro	Ser	Leu	Lys	Ser	Arg	Val	Thr	Ile	Ser	Leu	Asp	Thr	80	85	90	95
Ser	Lys	Ser	Gln	Phe	Ser	Leu	Lys	Leu	Ser	Ser	Leu	Thr	Ala	Ala	100	105	110	115
Asp	Thr	Ala	Val	Tyr	Trp	Cys	Ala	Arg	Ser	Thr	Arg	Leu	Arg	Gly	120	125	130	135
Ala	Asp	Tyr	Trp	Gln	Gln	Gly	Thr	Met	Val	Thr	Val	Ser	Ser		140	145	150	155

(2) INFORMATION FOR SEQ ID NO:6:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 114 amino acids
 (E) TYPE: amino acid
 (C) STRANDEDNESS: single
 (I) TOPOLOGY: linear
 (ii) MOLECULE TYPE: protein
 (iii) HYPOTHETICAL:

- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELLAR:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

Asp	Ile	Val	Met	Thr	Gln	Ser	Pro	Asp	Ser	Leu	Ala	Val	Ser	Leu	
1				5				10						15	
Gly	Glu	Arg	Ala	Thr	Ile	Asn	Cys	Lys	Ser	Ser	Gln	Ser	Val	Leu	
				20				25						30	
Tyr	Asn	Ser	Asn	Asn	Lys	Lys	Tyr	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	
				35				40						45	
Pro	Gly	Gln	Pro	Pro	Lys	Leu	Leu	Ile	Tyr	Trp	Ala	Ser	Thr	Arg	
				50				55						60	
Glu	Ser	Gly	Val	Pro	Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	
				65				70						75	
Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Ala	Glu	Asp	Val	Ala	
				80				85						90	
Val	Tyr	Tyr	Cys	Gln	Gln	Tyr	Tyr	Ser	Thr	Pro	Trp	Thr	Phe	Gly	
				95				100						105	
Gln	Gly	Thr	Lys	Val	Gln	Ile	Lys	Arg							
								110							

(2) INFORMATION FOR SEQ ID NO:7:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 17 base pairs

(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: cDNA
(iii) HYPOTHETICAL:
(iv) ANTI-SENSE:
(vi) ORIGINAL SOURCE: human IgM antibody
(A) ORGANISM:
(E) STRAIN:
(C) INDIVIDUAL ISOLATE:
(D) DEVELOPMENTAL STAGE:
(E) HAPLOTYPE:
(F) TISSUE TYPE:
(G) CELL TYPE:
(H) CELL LINE:
(I) ORGANELLE:
(vii) IMMEDIATE SOURCE:
(A) LIBRARY:
(E) CLONE:
(viii) POSITION IN GENOME:
(A) CHROMOSOME/SEGMENT:
(E) MAP POSITION:
(C) UNITS:
(ix) FEATURE:
(A) NAME/KEY:
(B) LOCATION:
(C) IDENTIFICATION METHOD:
(D) OTHER INFORMATION:
(x) PUBLICATION INFORMATION:
(A) AUTHORS:
(E) TITLE:
(C) JOURNAL:
(D) VOLUME:
(E) ISSUE:
(F) PAGES:
(G) DATE:
(H) DOCUMENT NUMBER:
(I) FILING DATE:
(J) PUBLICATION DATE:
(K) RELEVANT RESIDUES:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:
C GAG GGG GAA AAG GGI T 17

(2) INFORMATION FOR SEQ ID NO:3:
(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 19 base pairs
(E) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: cDNA
(iii) HYPOTHETICAL:
(iv) ANTI-SENSE:
(vi) ORIGINAL SOURCE: human IgM antibody
(A) ORGANISM:
(E) STRAIN:
(C) INDIVIDUAL ISOLATE:
(D) DEVELOPMENTAL STAGE:

- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE:
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHOR:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

G AAG CTC CTC AGA GGA GGG

19

- (2) INFORMATION FOR SEQ ID NO:9:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 366 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (v) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:

- (B) MAP POSITION:
- (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

CAG CTG CAG CTG CAG GAG TGG GGC CCA GGA CTG GTG AAG CCT TCG	45
GAG ACC CTG TCC CTC ACC TGC ACT GTC TCT GGT GGC TCC ATC AGC	90
AGT AGT AGT TAC TAC TGG GGC TGG ATC CGC CAG CCC CCA GGG AAG	135
GGG CTG GAG TGG ATT GGG AGT ATC TAT TAT AGT GGG AGC ACC TAC	180
TAC AAC CCG TCC CTC AAG AGT GGA GTC ACC ATA TCC GTA GAC ACG	225
TCC AAG AAC CAG TTC TCC CTG AAG CTG AGC TCT GTG ACC GCC GCA	270
GAC ACG GCT GTG TAT TAC TGT GCG AGG GGG AGC TAC GGG GGC TAC	315
TAC TAC GGT ATG GAC GTC TGG GGC CAA GGG ACC ACG GTC ACC GTC	360
TCC TCA	366

- (2) INFORMATION FOR SEQ ID NO:10:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 324 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: cDNA
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:

- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

TAT GAG CTG ACA CAG CCA GCG TCG GTG TCA GTG TCC CCA GGA CAG	45
ACG GCC AGG ATC AGC TGT TTT GGA GAT GCA TTG CCA AAG CAA TAT	90
GCT TAT TGG TAC CAG CAG AAG CCA GGC CAG GCC CCT GTG CTG GTG	135
ATA TAT AAA GAC AGT GAG AGG CCC TCA GGG ATC CCT GAG CGA TTC	180
TCT GGC TCC AGC TCA GGG ACA ACA GTC ACG TTG ACC ATC AGT GGA	225
GTC CAG GCA GAA GAC GAG GGT GAC TAT TAC TGT CAA TCA GCA GAC	270
AGC AGT GGT ACT TAT GAG GTA TTC GGC GGA GGG ACC AAG CTG ACC	315
GTC CTA GGT	324

- (2) INFORMATION FOR SEQ ID NO:11:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 111 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
 - (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:

- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Gln	Leu	Gln	Leu	Gln	Glu	Ser	Gly	Pro	Gly	Leu	Val	Lys	Pro	Ser		
1									10					15		
Glu	Thr	Leu	Ser	Leu	Thr	Cys	Thr	Val	Ser	Gly	Gly	Ser	Ile	Ser		
									20					25		
Ser	Ser	Ser	Tyr	Tyr	Trp	Gly	Trp	Ile	Arg	Gln	Pro	Pro	Gly	Lys		
									30					35		
Gly	Leu	Glu	Trp	Ile	Gly	Ser	Ile	Tyr	Tyr	Ser	Gly	Ser	Thr	Tyr		
									40					45		
Tyr	Asn	Pro	Ser	Leu	Lys	Ser	Arg	Val	Thr	Ile	Ser	Val	Asp	Thr		
									50					55		
Ser	Lys	Asn	Gln	Phe	Ser	Leu	Lys	Leu	Ser	Ser	Val	Thr	Ala	Ala		
									60					65		
Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Gly	Ser	Tyr	Gly	Gly	Tyr		
									70					75		
Tyr	Tyr	Gly	Met	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	Val	Thr	Val		
									80					85		
Ser	Ser								90					95		

- (2) INFORMATION FOR SEQ ID NO:12:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 108 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

(ix) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:

(x) PUBLICATION INFORMATION:

- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

Tyr	Glu	Leu	Thr	Gln	Pro	Pro	Ser	Val	Ser	Val	Ser	Pro	Gly	Gln	1	5	10	15
Thr	Ala	Arg	Ile	Thr	Cys	Ser	Gly	Asp	Ala	Leu	Pro	Lys	Gln	Tyr	20	25	30	35
Ala	Tyr	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Val	Leu	Val	40	45	50	55
Ile	Tyr	Lys	Asp	Ser	Gln	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe	60	65	70	75
Ser	Gly	Ser	Ser	Ser	Gly	Thr	Thr	Val	Thr	Leu	Thr	Ile	Ser	Gly	80	85	90	95
Val	Gln	Ala	Glu	Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Ser	Ala	Asp	100	105	110	115
Ser	Ser	Gly	Thr	Tyr	Gln	Val	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	120	125	130	135
Val	Leu	Gly													140	145	150	155

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 8 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: hybridoma producing human monoclonal

antibody, an antigen to which exists on the
surface of cancer cell membrane

- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION: 4
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION: xaa = "Cys or Ser"
- (ix) FEATURE:
 - (A) NAME KEY:
 - (B) LOCATION: 5
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION: xaa = "Gly or Ser"
- (ix) FEATURE:
 - (A) NAME KEY:
 - (B) LOCATION: 6
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION: xaa = "Phe or Tyr"
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

Ile Ser Ser Xaa Xaa Xaa Tyr Trp

1 1

(2) INFORMATION FOR SEQ ID NO:14:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 12 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:

- (F) TISSUE TYPE:
- (G) CELL TYPE: hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of cancer cell membrane
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION: 3
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION: xaa = "Tyr or Ser"
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

Ile Gly Xaa Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr
1 9 10

- (2) INFORMATION FOR SEQ ID NO:15:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 4 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of cancer cell membrane
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION: 2
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION: xaa = "Ala or Met"
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION: 4
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION: xaa = "Tyr or Val"
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

Gly Xaa Asp Xaa

1

- (2) INFORMATION FOR SEQ ID NO:16:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELINE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:

- (B) MAP POSITION:
- (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

Ile Ser Ser Cys Gly Phe Tyr Trp Asn
1 5

- (2) INFORMATION FOR SEQ ID NO:17:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 12 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELLER:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
 - (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
 - (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:

- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr
1 5 10

- (2) INFORMATION FOR SEQ ID NO:18:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 2 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
 - (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
 - (x) PUBLICATION INFORMATION:
 - (A) AUTHOR:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:

(K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Ser Thr Arg Leu Arg Gly Ala Asp Tyr
1 5

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANISM:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

(ix) FEATURE:

- (A) NAME KEY:
- (B) LOCATION:
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:

(x) PUBLICATION INFORMATION:

- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Lys Ser Ser Gln Ser Val Leu Tyr Asn Ser Asn Asn Lys Lys Tyr Leu Ala
1 5 10 15

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 7 amino acids

- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody GAH
 - (H) CELL LINE:
 - (I) CELL LINE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

Trp Ala Ser Thr Arg Glu Ser

1

- (2) INFORMATION FOR SEQ ID NO:21:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:

- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

Gln Gln Tyr Tyr Ser Thr Pro Trp Thr
 1 1

- (2) INFORMATION FOR SEQ ID NO:22:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 - (H) CELL LINE:
 - (I) ORGANELLE:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:

- (B) CLONE:
- (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
- (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:
 - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
 - (A) AUTHORS:
 - (B) TITLE:
 - (C) JOURNAL:
 - (D) VOLUME:
 - (E) ISSUE:
 - (F) PAGES:
 - (G) DATE:
 - (H) DOCUMENT NUMBER:
 - (I) FILING DATE:
 - (J) PUBLICATION DATE:
 - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

Ile Ser Ser Ser Ser Tyr Tyr Trp Gly Trp
1 5 10

- (2) INFORMATION FOR SEQ ID NO:23:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 14 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
 - (ii) MOLECULE TYPE: protein
 - (iii) HYPOTHETICAL:
 - (iv) ANTI-SENSE:
 - (vi) ORIGINAL SOURCE:
 - (A) ORGANISM:
 - (B) STRAIN:
 - (C) INDIVIDUAL ISOLATE:
 - (D) DEVELOPMENTAL STAGE:
 - (E) HAPLOTYPE:
 - (F) TISSUE TYPE:
 - (G) CELL TYPE: Hybridoma producing human antibody 1 3 1
 - (H) CELL LINE:
 - (I) ORGANELLER:
 - (vii) IMMEDIATE SOURCE:
 - (A) LIBRARY:
 - (B) CLONE:
 - (viii) POSITION IN GENOME:
 - (A) CHROMOSOME/SEGMENT:
 - (B) MAP POSITION:
 - (C) UNITS:
 - (ix) FEATURE:
 - (A) NAME/KEY:
 - (B) LOCATION:
 - (C) IDENTIFICATION METHOD:

- (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro
1 5 10

- ```

(2) INFORMATION FOR SEQ ID NO:24:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 12 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear
 (ii) MOLECULE TYPE: protein
 (iii) HYPOTHETICAL:
 (iv) ANTI-SENSE:
 (vi) ORIGINAL SOURCE:
 (A) ORGANISM:
 (B) STRAIN:
 (C) INDIVIDUAL ISOLATE:
 (D) DEVELOPMENTAL STAGE:
 (E) HAPLOTYPE:
 (F) TISSUE TYPE:
 (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
 (H) CELL LINE:
 (I) ORGANISM:
 (vii) IMMEDIATE SOURCE:
 (A) LIBRARY:
 (B) CLONE:
 (viii) POSITION IN GENOME:
 (A) CHROMOSOME/SEGMENT:
 (B) MAP POSITION:
 (C) UNITS:
 (ix) FEATURE:
 (A) NAME/KEY:
 (B) LOCATION:
 (C) IDENTIFICATION METHOD:
 (D) OTHER INFORMATION:
 (x) PUBLICATION INFORMATION:
 (A) AUTHORS:
 (B) TITLE:
 (C) JOURNAL:
 (D) VOLUME:
 (E) ISSUE:
 (F) PAGES:
 (G) DATE:

```

- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

Gly Ser Tyr Gly Gly Tyr Tyr Tyr Gly Met Asp Val  
1 5 10

- (2) INFORMATION FOR SEQ ID NO:25:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 9 amino acids
    - (B) TYPE: amino acid
    - (C) STRANDEDNESS: single
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: protein
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM:
    - (B) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:
    - (F) TISSUE TYPE:
    - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
    - (H) CELL LINE:
    - (I) ORGANELLER:
  - (vii) IMMEDIATE SOURCE:
    - (A) LIBRARY:
    - (B) CLONE:
  - (viii) POSITION IN GENOME:
    - (A) CHROMOSOME/SEGMENT:
    - (B) MAP POSITION:
    - (C) UNITS:
  - (ix) FEATURE:
    - (A) NAME/KEY:
    - (B) LOCATION:
    - (C) IDENTIFICATION METHOD:
    - (D) OTHER INFORMATION:
  - (x) PUBLICATION INFORMATION:
    - (A) AUTHORS:
    - (B) TITLE:
    - (C) JOURNAL:
    - (D) VOLUME:
    - (E) ISSUE:
    - (F) PAGES:
    - (G) DATE:
    - (H) DOCUMENT NUMBER:
    - (I) FILING DATE:
    - (J) PUBLICATION DATE:
    - (K) RELEVANT RESIDUES:
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

Asp Ala Leu Pro Lys Gln Tyr Ala Tyr  
1 5

(2) INFORMATION FOR SEQ ID NO:26:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 4 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
  - (H) CELL LINE:
  - (I) ORGANELLER:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHOR:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

Lys Asp Ser Glu

1

(2) INFORMATION FOR SEQ ID NO:27:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 11 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:

- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
  - (H) CELL LINE:
  - (I) ORGANELLER:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

Gln Ser Ala Asp Ser Ser Gly Thr Tyr Glu Val  
1 5 10

- (2) INFORMATION FOR SEQ ID NO:28:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 24 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (v) ORIGINAL SOURCE:
    - (A) ORGANISM:
    - (B) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:
    - (F) TISSUE TYPE:
    - (G) CELL TYPE: Hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of

- cancer cell membrane
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

ATC AGC AGT WGT RGT TWC TAC TGG 24

- (2) INFORMATION FOR SEQ ID NO:29:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 31 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM:
    - (B) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:
    - (F) TISSUE TYPE:
    - (G) CELL TYPE: Hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of cancer cell membrane
    - (H) CELL LINE:
    - (I) ORGANELLE:
  - (vii) IMMEDIATE SOURCE:
    - (A) LIBRARY:
    - (B) CLONE:
  - (viii) POSITION IN GENOME:
    - (A) CHROMOSOME/SEGMENT:

- (B) MAP POSITION:
- (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (E) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

ATT GGG WEY ATC TAT TAY AGT GGG AGC ACC TAC TAC 36

- (2) INFORMATION FOR SEQ ID NO:30:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 15 base pairs
    - (E) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM:
    - (E) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:
    - (F) TISSUE TYPE:
    - (G) CELL TYPE: Hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of cancer cell membrane
    - (H) CELL LINE:
    - (I) ORGANELLER:
  - (vii) IMMEDIATE SOURCE:
    - (A) LIBRARY:
    - (E) CLONE:
  - (viii) POSITION IN GENOME:
    - (A) CHROMOSOME/SEGMENT:
    - (E) MAP POSITION:
    - (C) UNITS:
  - (ix) FEATURES:
    - (A) NAME/KEY:
    - (B) LOCATION:
    - (C) IDENTIFICATION METHOD:
    - (D) OTHER INFORMATION:
  - (x) PUBLICATION INFORMATION:

- (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

GGK RYK GAC KWC 12

(2) INFORMATION FOR SEQ ID NO:31:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 24 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody GAH
  - (H) CELL LINE:
  - (I) ORGANELLER:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNIT:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
- (J) PUBLICATION DATE:

- (K) RELEVANT RESIDUES:  
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

ATC AGC AGT TGT GGT TTC TAC TGG 24

(2) INFORMATION FOR SEQ ID NO:32:

- (i) SEQUENCE CHARACTERISTICS:  
    (A) LENGTH: 36 base pairs  
    (B) TYPE: nucleic acid  
    (C) STRANDEDNESS: double  
    (D) TOPOLOGY: linear  
(ii) MOLECULE TYPE: cDNA  
(iii) HYPOTHETICAL:  
(iv) ANTI-SENSE:  
(vi) ORIGINAL SOURCE:  
    (A) ORGANISM:  
    (E) STRAIN:  
    (C) INDIVIDUAL ISOLATE:  
    (D) DEVELOPMENTAL STAGE:  
    (E) HAPLOTYPE:  
    (F) TISSUE TYPE:  
    (G) CELL TYPE: Hybridoma producing human antibody GAH  
    (H) CELL LINE:  
    (I) ORGANELLER:  
(vii) IMMEDIATE SOURCE:  
    (A) LIBRARY:  
    (E) CLONE:  
(viii) POSITION IN GENOME:  
    (A) CHROMOSOME/SEGMENT:  
    (B) MAP POSITION:  
    (C) UNITS:  
(ix) FEATURE:  
    (A) NAME/KEY:  
    (B) LOCATION:  
    (C) IDENTIFICATION METHOD:  
    (D) OTHER INFORMATION:  
(x) PUBLICATION INFORMATION:  
    (A) AUTHORS:  
    (E) TITLE:  
    (C) JOURNAL:  
    (D) VOLUME:  
    (F) ISSUE:  
    (G) PAGES:  
    (H) DATE:  
    (I) DOCUMENT NUMBER:  
    (J) FILING DATE:  
    (K) PUBLICATION DATE:  
    (L) RELEVANT RESIDUES:  
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

ATT GGG TAC ATC TAT TAC AGT GGG AGC ACC TAC TAC 36

(2) INFORMATION FOR SEQ ID NO:33:

- (i) SEQUENCE CHARACTERISTICS:  
    (A) LENGTH: 27 base pairs  
    (B) TYPE: nucleic acid  
    (C) STRANDEDNESS: double

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody GAH
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

TCT ACC CGA CTA CGG GGA GGT GAC TAC 27

- (2) INFORMATION FOR SEQ ID NO:34:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 51 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM:
    - (B) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:

- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHOR:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

|                                         |    |
|-----------------------------------------|----|
| AAG TCC AGC CAG AGT GTT TTA TAC AAC TCC | 30 |
| AAC AAT AAG AAA TAC TTA GGT             | 51 |

- (2) INFORMATION FOR SEQ ID NO:35:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 51 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRAIN/GENESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (v) ORIGINAL SOURCE:
    - (A) ORGANISM:
    - (B) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:
    - (F) TISSUE TYPE:
    - (G) CELL TYPE: Hybridoma producing human antibody GAH
    - (H) CELL LINE:
    - (I) ORGANELLE:
  - (vii) IMMEDIATE SOURCE:
    - (A) LIBRARY:
    - (B) CLONE:
  - (viii) POSITION IN GENOME:
    - (A) CHROMOSOME/SEGMENT:

- (B) MAP POSITION:
- (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

TGG GCA TCT ACC TGG GAA TCG 21

- (2) INFORMATION FOR SEQ ID NO:36:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 27 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM:
    - (B) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:
    - (F) TISSUE TYPE:
    - (G) CELL TYPE: Hybridoma producing human antibody GAH
    - (H) CELL LINE:
    - (I) ORGANELLER:
  - (vii) IMMEDIATE SOURCE:
    - (A) LIBRARY:
    - (B) CLONE:
  - (viii) POSITION IN GENOME:
    - (A) CHROMOSOME/SEGMENT:
    - (B) MAP POSITION:
    - (C) UNITS:
  - (ix) FEATURE:
    - (A) NAME/KEY:
    - (B) LOCATION:
    - (C) IDENTIFICATION METHOD:
    - (D) OTHER INFORMATION:
  - (x) PUBLICATION INFORMATION:
    - (A) AUTHORS:
    - (B) TITLE:

- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

CAG CAG TAT TAT AGT ACT CCG TGG ACG 27

(2) INFORMATION FOR SEQ ID NO:37:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 30 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (E) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
  - (H) CELL LINE:
  - (I) ORGANELLER:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (E) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (E) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (E) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (E) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

ATC AGC AGT AGT AGT TAC TAC TGG GGC TGG 30

(2) INFORMATION FOR SEQ ID NO:38:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 42 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
  - (H) CELL LINE:
  - (I) ORGANELLER:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

ATT GGG AGT ATC TAT TAT AGT GGG AGC ACC TAC TAC AAC CCG 42

(2) INFORMATION FOR SEQ ID NO:39:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 36 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:

- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHOR:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

GGG AGC TAC GGG GGC TAC TAC TAC GGT ATG GAC GTC 36

- (2) INFORMATION FOR SEQ ID NO:40:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 27 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM:
    - (B) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:
    - (F) TISSUE TYPE:
    - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
    - (H) CELL LINE:
    - (I) ORGANELLE:

- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

GAT GCA TTG CCA AAG CAA TAT GGT TAT 27

- (2) INFORMATION FOR SEQ ID NO:41:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 12 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (v) ORIGINAL SOURCE:
    - (A) ORGANISM:
    - (B) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:
    - (F) TISSUE TYPE:
    - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
    - (H) CELL LINE:
    - (I) ORGANELLER:
  - (vii) IMMEDIATE SOURCE:
    - (A) LIBRARY:
    - (B) CLONE:
  - (viii) POSITION IN GENOME:
    - (A) CHROMOSOME/SEGMENT:
    - (B) MAP POSITION:
    - (C) UNITS:
  - (ix) FEATURE:
    - (A) NAME/KEY:

- (B) LOCATION:
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

AAA GAC AGT GAG 12

- (2) INFORMATION FOR SEQ ID NO:42:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 33 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM:
    - (B) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:
    - (F) TISSUE TYPE:
    - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
    - (H) CELL LINE:
    - (I) ORGANELLER:
  - (vii) IMMEDIATE SOURCE:
    - (A) LIBRARY:
    - (B) CLONE:
  - (viii) POSITION IN GENOME:
    - (A) CHROMOSOME/SEGMENT:
    - (B) MAP POSITION:
    - (C) UNIT:
  - (ix) FEATURE:
    - (A) NAME/KEY:
    - (B) LOCATION:
    - (C) IDENTIFICATION METHOD:
    - (D) OTHER INFORMATION:
  - (x) PUBLICATION INFORMATION:
    - (A) AUTHORS:
    - (B) TITLE:
    - (C) JOURNAL:
    - (D) VOLUME:
    - (E) ISSUE:
    - (F) PAGES:

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(G) DATE:  
(H) DOCUMENT NUMBER:  
(I) FILING DATE:  
(J) PUBLICATION DATE:  
(K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

CAA TCA GCA GAC AGC AGT GGT ACT TAT GAG GTA 33